

REMARKS

Reconsideration and allowance of this application are respectfully requested in view of the above amendment and the discussion below.

Applicants invention, as defined by independent claims 1, 13 and 14 concerns an improved imaging system and method for displaying images in motor vehicles which provides a high image quality and a higher degree of ergonomics and improved safety in traffic situations. With the present invention, the motor vehicle driver views images without diverting his attention or causing tiredness because of continuous required eye movement. A holographic screen, according to the present invention, scatters incident narrow bands of light of one or more wavelength at a predetermined solid angle. A transparent holographic ray uniter allows broad band ambient light to pass unimpeded and guide the narrow light band coming from the holographic screen to the viewer to produce a virtual image at the viewing location, as shown in the drawings.

Claim 13 has been rejected under 35 U.S.C 102 as anticipated by the reference to Kato et al. U.S. Patent No. 5,497,170 while claims 1, 3-5, 8,-12 and 14 have been rejected under 35 U.S.C. 103 as being obvious over Kato et al. '170 in view of Kanda et al. U.S. Patent No. 6,198,554. Claims 6 and 7 have been rejected under 35 U.S.C. 103 as unpatentable over Kato et al. in view of Kanda et al. and further in view of Nanba et al. U.S. Patent No. 4,832,427 and claim 16 has been rejected as unpatentable over Kato et al. Claim 2 is rejected over the combination of

Kato et al., Kanda et al. and “Official Notice” while claims 15 and 17 have been rejected over Kato et al. in view of “Official Notice”.

Applicants respectfully traverse these rejections on the grounds that each of independent claims 1, 13 and 14 provide structure or method limitations of a system not shown or disclosed or made obvious by the references or any obvious combination to one of ordinary skill in the art.

The reference to Kato et al. U.S. Patent No. 5,497,170 is a headup display apparatus installed in the dashboard of a car with a reflection member on the windshield. The indicator 1, which is a fluorescent indicator tube, displays information such as the speed of the automobile. The light emitter from the indicator is reflected by the reflective hologram 2 and is further reflected by the concave mirror 30 and still further reflected by the windshield 15 as indicated at column 4, lines 58-63, column 5, lines 20 and column 7, lines 63-65 with reference being made to respectively Figures 1 and 13. The windshield 15 is coated with a reflection hologram and, in order to achieve reflection capable of the hologram 2, it is manufactured in accordance with Figure 12 wherein there are mirrors 500 and 600 as indicated at column 5, lines 29-54.

As a result, the hologram 2 of Kato et al. does not scatter the instant light at a predetermined angle, but instead reflects the light emitted from the indicator. It is to be noted that each of original claims 1 and 14 and the amended claim 13 require the scattering of incident narrow band light by the hologram screen.

Additionally, light emitted by the indicator 1 of Kato et al. has a variety of wavelength components and is essentially a fluorescent indicator tube (column 4, lines 58-60 and column 6, lines 14-21 and Figure 4a of Kato et al.). As a result there is a problem with chromatic aberration resulting in a blurred image as indicated at column 6, lines 14 to 27 of Kato et al.

In conclusion the hologram of Kato et al. does not scatter an incident narrow band of light of one or more wavelengths at a predetermined solid angle as is specifically required by independent claim 1. In fact, there is no disclosure in Kato et al. of a narrow band light which is scattered by the holographic screen or which is guided to the viewer. As indicated above, each of independent claims 1, 13 and 14 recite that there is a scattered light by the holographic screen in contrast to the reference to Kato et al. In addition, as indicated by the Examiner, the reference to Kato et al. does not disclose that the holographic screen has a recording of a real screen.

The reference to Kanda et al. U.S. Patent No. 6,198,554 is concerned with a method for producing a hologram and a display device which uses the hologram. While it is true that there is a holographic screen having a recording of a real screen in Kanda et al., it must be noted that such a holographic screen is also described in many other documents and is related as such in paragraph [0029] of the present application. It is submitted that this does not lead however to an obvious combination of the references.

One skilled in the art would have no reason or motivation to use the holographic screen disclosed by Kanda et al. instead of the hologram 2 in the system of Kato et al. There is no indication that it would lead to an improvement and furthermore the manufacturing of a holographic screen is more complicated and would lead, without further knowledge only available from Applicants disclosure, to a more expensive system.

Additionally, the reference to Kato et al. contains indications that would lead one of ordinary skill in the art away from such a combination. That is, the important properties of the hologram 2 of Kato et al. are in its reflection ability. The hologram 2 of Kato et al. is designed to reflect light emitted from the indicator, as provided at column 4, lines 61. In contrast, a holographic screen, which is produced by a holographic recording of a real screen, would not reflect the light. Instead it has the properties of a diffuser so that one skilled in the art would not replace an essential light reflecting element of Kato et al. by a light diffuser element without some overriding reason.

Neither the reference to Kato et al. nor the secondary reference to Nanba et al. discloses a projector in combination with a holographic screen which is produced by means of a holographic recording of a real screen which scatters incident narrow band light of one or more wavelengths at a predetermined solid angle. There is no teaching in the prior art, whether taken together, or individually which lead one skilled in the art to combine such a holographic screen with an imaging system for motor vehicles.

Claims 2, 10, 13 and 15-17 have been objected to because of the informalities listed at page 2. In response to this objection Applicants have amended claims 2, 10, 13, 15 and 16-17 to provide a proper antecedent basis or to comply with the Examiner's requirements for a desired wording.

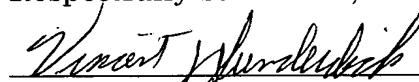
Therefore in view of the distinguishing features between the claimed invention and the references which features are specifically set forth in independent claims 1, 13 and 14, Applicants respectfully request that this application containing claims 1-17 be allowed and be passed to issue.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #056226.50771US).

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Respectfully submitted,



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